M. K. DUTY.
Churn.

2 Sheets—Sheet 1.

No. 198,363. Patented Dec. 18, 1877.

Fig. 1.

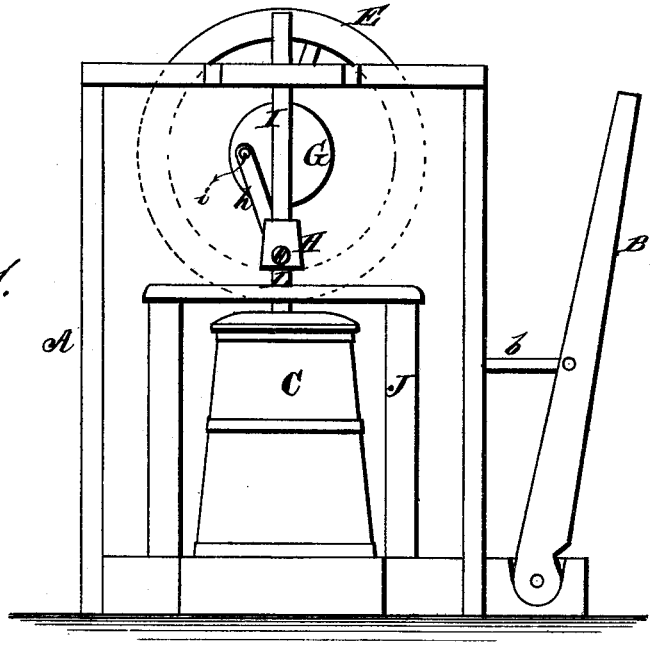
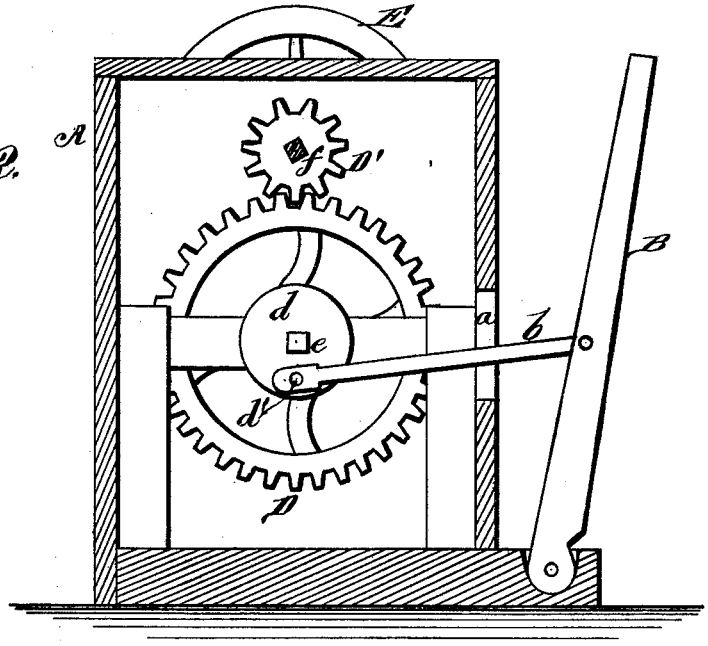


Fig. 2.



WITNESSES

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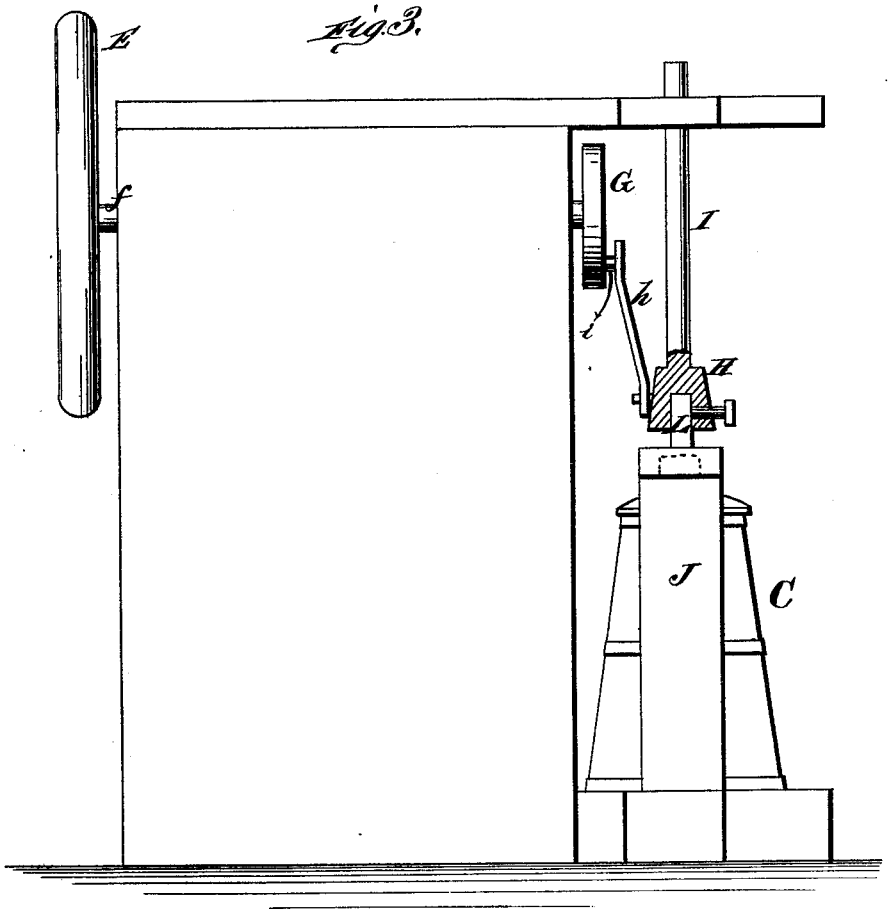
2 Sheets—Sheet 2.

M. K. DUTY.

Churn.

No. 198,363. **Patented Dec. 18, 1877.**

Fig. 3.



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UNITED STATES PATENT OFFICE.

MICHAEL K. DUTY, OF CENTERVILLE, WEST VIRGINIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO A. S. LOVEALL, OF SAME PLACE.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **198,363**, dated December 18, 1877; application filed November 10, 1877.

To all whom it may concern:

Be it known that I, MICHAEL K. DUTY, of Centerville, in the county of Tyler and State of West Virginia, have invented a new and valuable Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of front view of my churn. Fig. 2 is a longitudinal vertical section, and Fig. 3 is a side view, part sectional, of the same.

The nature of my invention consists in the construction and arrangement of a churn-power, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents a square or rectangular box or casing of any suitable dimensions. The bottom of this box is extended on one side to form a rest for the operating-lever B, and on the front to form a support or platform, upon which the churn C rests.

The lower end of the lever B is rounded, and pivoted in a concavity formed in the projecting part of the bottom, and said lever is to be worked by hand back and forth on said pivot, this movement being to and from the box. The lever B is, by a rod or pitman, *b*, connected with a wrist-pin, *d'*, projecting from a disk, *d*, attached to a shaft, *e*, in the center of the box A, said pitman passing through a slot, *a*, in the side of the box, as shown.

On the shaft *e* is secured a large cog-wheel, D, which meshes with a pinion, D', upon a shaft, *f*, above the shaft *e*.

The shaft *f* projects through the front and back of the box, and has on its rear end a fly-wheel, E. On the front end of said shaft *f* is a disk, G, with wrist-pin *i*, from which a pitman, *h*, connects with a coupling or socket, H. This socket or coupling is provided with a guide-pin or guide-rod, I, which passes vertically upward through an overhanging portion of the roof or top of the box A.

The churn C is placed in a frame, J, erected upon the front projecting portion of the bottom of the box, and the dasher-rod L passes upward through the top of this frame, and is fastened in the coupling H by a screw, pin, or other suitable means.

By working the lever B slowly back and forth the churn-dasher obtains a rapid vertically-reciprocating motion, and but little force is required to operate the same. The operating mechanism is entirely inclosed, so no injury can result to it or by it.

To remove the churn, uncouple the churn-dasher L at H, and then lift off the top of the frame J, (which is made removable for that purpose,) and the churn can be lifted off.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the box A, vibrating lever B, pitman *b*, crank-disk *d*, shafts *e f*, gears D D', fly-wheel E, crank-disk G, pitman *h*, and coupling H with guide-pin I, all constructed substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MICHAEL KERN DUTY.

Witnesses:

A. S. LOVEALL,

E. BENNINGAS.